

### ABSTRACT OF THE DISCLOSURE

A light-emitting semiconductor device provides an active layer which comprises thirteen (13) layers that includes six (6) pairs of quantum barrier layers made of  $\text{Al}_{0.95}\text{In}_{0.05}\text{N}$  and quantum well layers made of  $\text{Al}_{0.70}\text{In}_{0.30}\text{N}$ , which are laminated together alternately. The semiconductor device may also comprise a quantum well layer having a high composition ratio of indium (In). Forming the quantum barrier layer and the quantum well layer to have a high composition ratio of indium (In) increases the lattice constant of the active layer of the semiconductor device.